UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

KRAUSZ INDUSTRIES, Plaintiff, v. ROMAC INDUSTRIES, INC., *et al.*, Defendants,	Case No. C10-1204RSL ORDER CONSTRUING CLAIMS OF THE '556 and '955 PATENTS

Plaintiff Krausz Industries is the owner of United States Patent Nos. 6,293,556 ("the '556 Patent") and 7,243,955 ("the '955 Patent"), (collectively, the "patents"). The parties disagree regarding the interpretation of eight claim terms contained in the patents.

Plaintiff contends that defendants Romac Industries, Inc. and Everett J. Prescott, Inc. have infringed the patents by making, using, selling, and offering for sale products that embody at least one claim of the patent. Determining whether a particular product infringes an existing patent involves a two-step analysis. The Court must first identify the proper construction of the asserted patent claim, an exercise which the Supreme Court has determined is a matter of law. Markman v. Westview Instruments, Inc., 517 U.S. 370, 384-91 (1996). After the claim has been properly construed, the fact finder determines whether the accused device infringes the claim. The Federal Circuit recently reiterated

that, although the claims of the patent define the invention to which the patentee is entitled the right to exclude, the claim construction analysis must focus on how a person of ordinary skill in the art would understand the claim terms after reading the entire patent. Phillips v. AWH Corp., 415 F.3d 1303, 1321, 1323 (Fed. Cir. 2005).

> It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed. Such person is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field. The inventor's words that are used to describe the invention – the inventor's lexicography – must be understood and interpreted by the court as they would be understood and interpreted by a person in that field of technology. Thus the court starts the decisionmaking process by reviewing the same resources as would that person, *viz.*, the patent specification and the prosecution history.

Id. at 1313 (quoting Multiform Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1477 (Fed. Cir. 1998)).

The Phillips decision sets out a framework for claim construction that synthesizes prior law while rejecting the earlier tendency to over-emphasize extrinsic evidence. The claims themselves, rather than dictionaries, encyclopedias, and treatises, provide a context for the contested terms and comparisons against which to measure the scope of the various claims. Phillips, 415 F.3d at 1314-15. Unless the meaning of the claim language is "readily apparent even to lay judges" (id. at 1314), the court should "rely heavily" on the patentee's written description of the invention (id. at 1317), giving the claims "their broadest reasonable construction 'in light of the specification as it would be interpreted by one of ordinary skill in the art.'" Id. at 1316 (quoting In re Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004)). Other evidence of how the patentee and the PTO understood the claims contained in the prosecution history can also inform the meaning of the claim language, although the Federal Circuit warns that this resource

sometimes lacks the clarity of the patent itself. Id. at 1317.

When interpreting claim terms, district courts may also "rely on extrinsic evidence, which 'consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." Phillips, 415 F.3d at 1317 (quoting Markman, 52 F.3d at 980). Such evidence is especially useful for helping the court understand the underlying technology, explaining how an invention works, and establishing the way in which one skilled in the art would use the claim terms. Phillips, 415 F.3d at 1318. Courts should not, however, put too much emphasis on extrinsic evidence as the starting point for construing claim terms because such evidence "is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." Phillips, 415 F.3d at 1319. The claim construction methodology set forth in Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed. Cir. 2002), which encouraged district courts to rely on dictionary definitions when ascertaining the ordinary meaning of particular claim terms, with recourse to the specification serving only as a check on the dictionary definition, was rejected:

> The main problem with elevating the dictionary to such prominence is that it focuses the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent. Properly viewed, the "ordinary meaning" of a claim term is its meaning to the ordinary artisan after reading the entire patent. Yet heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification.

Phillips, 415 F.3d at 1321.

Even while rejecting the methodology of Texas Digital, the Federal Circuit acknowledged that the purpose underlying that decision, namely to avoid "one of the cardinal sins of patent law – reading a limitation from the written description into the

claims," was sound. Phillips, 415 F.3d at 1319-20, 1323 (quoting SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1340 (Fed. Cir. 2001)). The court also recognized:

> [T]he distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice. However, the line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court's focus remains on understanding how a person of ordinary skill in the art would understand the claim terms. For instance, although the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments. In particular, we have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment. That is not just because section 112 of the Patent Act requires that the claims themselves set forth the limits of the patent grant, but also because persons of ordinary skill in the art rarely would confine their definitions of terms to the exact representations depicted in the embodiments.

Phillips, 415 F.3d at 1323 (citations omitted).

Having reviewed the memoranda and exhibits submitted by the parties and having heard the arguments of counsel at the hearing on June 30, 2011, the Court finds as follows:

I. THE '556 PATENT

In this litigation, the parties dispute the meaning of certain terms and phrases. The Claims of the '556 patent read:

> 1. A sealing ring for pipe connector means made of resilient material, the sealing ring comprising a first sleeve-like ring the cross section of which defines a inner space therein, and a second ring overriding said first sleeve-like ring and **being loosely connected to said first ring**, said second ring **being adapted to be torn off said first ring** at a **predetermined location** so as to adapt the sealing ring to interconnect pipes of substantially different diameters.
>
> 2. A sealing ring as claimed in claim 1 where said second ring is

integral with said first ring.

3. A sealing ring as claimed in claim 1 where said seal is incorporated with connecting means provided with a U shape ring and placed within said U shaped ring.

The Court has added bold demarcation for the disputed terms.

A. "Being Loosely Connected to Said First Ring"

Plaintiff proposes the construction, "the two seal rings, which can be individual rings, are joined or linked together, for example, as by means of one or more matching protrusions and recesses built into the mating surfaces of the rings." Dkt. #123 (Pl's Opening Br.) at 6. Romac proposes the construction, "a material connection joining the rings. 'Loosely connected' does not include nested or interlocking rings that are not otherwise physically attached to each other by a material connection." Dkt. #121 (Def.'s Opening Br.) at 7. Romac argues that Krausz's construction would mean that Claim 1 does not require a connection at all between the rings. Id. at 3.

Claim 1 specifically provides that a second ring overrides and is loosely connected to the first ring, and that the second ring is adapted to be torn off the first ring at a predetermined location. The "context in which a term is used in the asserted claim can be highly instructive." Phillips, 415 F.3d at 1314. The claim in this case refers to the second ring being "loosely connected" to the first ring, which strongly implies that not all connections are loose. The preferred embodiment explains that the seal is divided into two main parts: "a sleeve-like ring which is preferably provided with inner space" (part 1 in FIG. 1), and the second ring (part 5 in FIG. 1) "which is connected to said first sleeve part at 7." Dkt. #124 (1st Keyes Decl.), Ex. 1 ('556 Patent) at col. 2:6-11. The second ring (part 5) "rides over said first sleeve 1 and could be removed by tearing and separating between the two parts. The tearing off is made along a thin connection line 7."

Id. at col. 2:12-14. Additionally, one object of the invention is "to provide a seal made of two parts which could be used as a whole or one part thereof." Id. at col. 1:30-33.

Romac attempts to impermissibly impose a limitation (a "material" connection) that is not found in or required by the claim. However, the plain language of Claim 1 and preferred embodiment only require some sort of "loose" connection between the rings. Indeed, the abstract of the '556 Patent provides that the seal "is composed of two ring parts the first one seated over the second one and connected thereto in a manner which will allow easy disconnecting [of] the second ring from the first ring." Dkt. #124, Ex. 1 ('556 Patent) at p. 1. The dictionary definition on which plaintiff relies defines "connected" as "joined or linked together" or "having parts or elements logically linked together." Dkt. #124, Ex. 5 (Merriam-Webster's Collegiate Dictionary (10th ed. 1998) at p. 244. That definition, like the claims, does not require a "material" (i.e., substantial) connection between the rings, but, instead, could include parts or elements that loosely link the rings together.

Contrary to Romac's assertions, the prosecution history bolsters this conclusion. In an Office Action dated February 17, 2000, the United States Patent and Trademark Office ("USPTO") issued a rejection of U.S. Patent Application No. 09/156,288 (now the '556 Patent) based on U.S. Patent No. 5,203,594 ("Straub"). Dkt. #124 (1st Keyes Decl.) ¶8, Ex. 7. The response to the rejection provides, in relevant part:

> Claim 1 (Amended) defines a sealing ring comprising a first, sleeve-like, ring whose cross section defines a space. A second ring overrides the first sleeve-like ring and is loosely connected to that first ring. The second ring is adapted to be torn off the first ring, to adapt the sealing ring for interconnecting pipes of substantially different diameters. . . . The tear-off connection of the second ring to the first ring permits easy and certain separation of the rings as appropriate, by a worker interconnecting the pipes.
>
> *Straub* discloses a pipe coupling requiring three rings 15, 19, and 28,

> to effect a seal between adjacent pipes. **No two of the rings in *Straub* can be said to meet the first and second rings** as now recited in amended Claim 1, and *Straub* fails to anticipate the overall combination of elements now defined in that claim.
>
> * * *
>
> Claim 1 also requires that the second ring is adapted to be torn off the first ring. The rings 15, 19, and 28 in *Straub* are **separate elements, none of which is connected to the other** and thus none of which is adapted to be torn off another such ring. Claim 1 thus defines novel structure over *Straub* for that additional reason.

Id. ¶9, Ex. 8 at p. 3-4 (emphasis added). The prosecution history makes clear that the *Straub* rings were separate elements that were not connected to each other. In contrast, the '556 rings are connected, albeit "loosely," and are not separate elements.[1]

Accordingly, in light of the claim language, specification and prosecution history, one of ordinary skill in the art would have understood the term "being loosely connected to said first ring" to mean "a connection joining or linking the second ring to the first ring."[2]

B. "Being Adapted to be Torn Off Said First Ring"

Plaintiff contends that "being adapted to be torn off said first ring" should be construed to mean that "the second, or inner sealing ring can be disconnected from, peeled off, pulled apart, or otherwise separated from the first ring." Dkt. #123 (Pl.'s

---

[1]The Court declines Romac's invitation to apply the maxim of construing claims to preserve validity. The Court has applied all available tools of claim construction and finds that the claim term is not ambiguous. Phillips, 415 F.3d at 1327 (maxim of construing claims to preserve validity is limited to cases where "the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous").

[2]It is in the sound discretion of the Court whether to admit and use extrinsic evidence. Phillips, 415 F.3d at 1319. The Court finds that the only extrinsic evidence helpful to the Court are the definitions. Accordingly, the Court has disregarded all other extrinsic evidence. The Court therefore DENIES Romac's motion *in limine* to exclude alterations to deposition testimony as MOOT. Dkt. #139.

Opening Br.) at 9. Romac contends that "being adapted to be torn off said first ring" means that "there is a material connection between the rings that is split apart by tearing, rending, ripping, or severing the material. 'Torn off' does not cover other forms of disconnection or separation." Dkt. #121 (Def.'s Opening Br.) at 12.

Claim 1 specifically provides that the second ring is adapted to be torn off the first ring. The preferred embodiment explains that the second ring (part 5 of FIG. 1) "rides over said first sleeve 1 and could be removed by tearing and separating between the two parts. The tearing off is made along a thin connection line 7." Dkt. #124 (1st Keyes Decl.), Ex. 1 ('556 Patent) at 2:12-14. The abstract of the '556 Patent provides that the seal "is composed of two ring parts the first one seated over the second one and connected thereto in a manner which will allow easy disconnecting [of] the second ring from the first ring." Id. at p. 1. After the examiner rejected the claims as anticipated by *Straub*, plaintiff amended the claim from "could be torn off" to "being adapted to be torn off," and explained:

> Claim 1 also requires that the second ring is adapted to be torn off the first ring. The rings 15, 19, and 28 in *Straub* are separate elements, none of which is connected to the other and thus none of which is adapted to be torn off another such ring. Claim 1 thus defines novel structure over *Straub* for that additional reason.
>
> *Straub* discloses a nonresilient cylindrical jacket or housing 11 surrounding the sleeve 15, the end ring 16, and the insert 28 received within the sleeve. That jacket 11 merely surrounds and defines the space within which the elastomer seal construction surrounds the adjacent pipe end. Furthermore, the jacket 11 is not adapted to be torn off the sleeve 15 or any other element of *Straub*'s seal. That jacket 11 thus cannot comprise any element of the applicant's claimed sealing ring.

Dkt. #124 (1st Keyes Decl.) ¶9, Ex. 8 at p. 4-5. During oral argument, plaintiff conceded that some use of force is necessary to tear the second ring from the first ring.

Accordingly, one of ordinary skill in the art would have understood the term

"being adapted to be torn off said first ring" to mean that the connection between the rings "is capable of being split apart by tearing with the use of force the second ring from the first ring."

C. "Predetermined Location"

Plaintiff contends that "predetermined location" should be construed to mean "the surface area or boundary between the two seal rings." Dkt. #123 (Pl.'s Opening Br.) at 11. Romac contends that "predetermined location" should be construed to mean "a specific place where there is a tearing, rending, ripping or severing of the material connection." Dkt. #121 (Def.'s Opening Br.) at 14.

The preferred embodiment explains that the seal is divided into two main parts. Dkt. #124 (1st Keyes Decl.), Ex. 1 ('556 Patent) at col. 2:6-11. The second ring (part 5) "rides over said first sleeve 1 and could be removed by tearing and separating between the two parts. The tearing off is made along a thin connection line 7." Id. at col. 2:12-14.

Accordingly, one skilled in the art would have understood the term to mean "the area connecting the second ring to the first ring."

II. THE '955 PATENT

The Claims of the '955 patent read:

> 1. A universal pipe connector for forming an angularly flexible connection with at least one pipe end, the universal pipe connector comprising:
> a connector body having an opening for receiving the pipe end,
> a clamping ring extending around, and in mechanical engagement with, said opening; and
> a sealing element deployed around and in contact with an inner surface of said clamping ring **said inner surface having at least partially curved cross-section**, said sealing element having an annular sealing surface coaxial with the pipe for sealing around an outer coaxial surface of the pipe end, wherein said sealing element is formed with a primary inner surface and at least one substantially

> cylindrical coaxial layer, said layer being connected to **said primary inner surface by a readily severable connection** wherein said sealing element comprises a plurality of substantially cylindrical coaxial layers having complementary interlocking features configured to oppose relative movement of complementary interlocking features configured to oppose relative movement of said layers in at least one axial direction and wherein **said sealing element is adapted to swivel within said inner surface to accommodate variations in pipe alignment**, wherein the inner girth of said connector body gradually increases away from the opening and wherein said opening is adapted to receive said clamping ring extending around said opening,
>
> wherein said clamping ring comprises a tightening mechanism for tightening said clamping ring **between a first maximum diameter and a second minimum diameter**.
>
> wherein said first and second diameters differ by at least a length d and wherein said cylindrical coaxial layer is of thickness ½ d such that, by selectively removing said layer and tightening said tightening mechanism, the pipe connector forms a sealing connection with pipes having diameters varying over a continuous range of at least 2d,
>
> wherein said clamping ring is formed **as a split ring with outward-turned bolt flanges** of substantially arcuate form, said tightening mechanism including a bolt connected between said bolt flanges.
>
> 2. The pipe connector of claim 1, wherein said tightening mechanism further includes at least one curved-base profile piece engaged against one of said bolt flanges.

The Court has added bold demarcation for the disputed terms.

A. "Said Inner Surface Having At Least Partially Curved Cross-Section"

Plaintiff contends that the term should be construed to mean "the cross sectional shape of the clamping ring is at least partially curved." Dkt. #123 (Pl.'s Opening Br.) at 13. Romac contends that the term should be construed to mean "a line deviating from straightness in a smooth and continuous manner, as viewed from the side of the coupling rather than the end. A straight part or an angular bend between two straight parts is not 'curved.'" Dkt. #121 (Def.'s Opening Br.) at 15.

As a preliminary matter, Romac argues that plaintiff's claim construction

represents a fundamental shift in position. Romac argues that plaintiff has previously committed to an "end view" construction of the term "partially curved cross-section," and should therefore be foreclosed from seeking a different construction. Dkt. #121 (Def.'s Opening Br.) at 16-17. Romac is mistaken. The Court has previously stated: "Defendant's argument of insufficiency is premised on its belief that the cross-section **must** be viewed 'axially.' In contrast, plaintiff argues that it **may** be viewed, and has depicted it, from a longitudinal or end view." Dkt. #87 at 3 (emphasis added). The Court did not, as Romac contends, note that plaintiff "was committed to the end view construction." Rather, the Court simply noted that where plaintiff argued that the cross-section may be viewed from a longitudinal or end view, and Romac argued that it must be viewed axially, the Court would resolve the issue at a later stage. Dkt. #87 at 3.

Claim 1 provides in relevant part: "a sealing element deployed around and in contact with an inner surface of said clamping ring said inner surface having at least partially curved cross-section." Dkt. #124 (1st Keyes Decl.), Ex. 2 ('955 Patent) at col. 6:42-44. In describing the drawings, the specifications provide:

> FIG. **1** is an axial cross-section through a first embodiment of a connector, constructed and operative teachings of the present invention, employed to connect the ends of two pipes;
> FIG. **2** is a transverse cross-section through the connector of FIG. **1**;
> FIG. **3** is an axial cross-section through a second embodiment of a connector, constructed and operative according to the teachings of the present invention, employed to connect the ends of two pipes; and
> FIG. **4** is a transverse cross-section through the connector of FIG. **3**.

Id. at col. 3:19-30. The differentiation between axial and transverse cross-section in the description of the drawings, but not in the claim ("partially curved cross-section") strongly implies that the claim is not limited to a particular view (axial or side view as opposed to transverse or end view). Romac's construction would limit the term based on the viewpoint "from the side" (or axial) "rather than the end" (or transverse/longitudinal).

Several relevant specifications refer only to the axial cross-section:

> According to a further feature of the present invention, the primary outer sealing ring features a convex outer surface as viewed in axial cross-section (col. 1:62-64)[;]
>
> * * *
>
> According to a further feature of the present invention, the annular sealing element further features a convex outer surface as viewed in axial cross-section (col. 2:36-38)[; and]
>
> * * *
>
> Preferably, the outer face **33** of outer sealing ring **30** is convexly curved, and typically approximately round, as viewed in axial cross-section. This together with a complimentary shaped inner surface of clamping ring **22** facilitates swiveling of sealing element **26** to accommodate variations in pipe alignment (col. 4:22-27).

Nevertheless, importing such a limitation would seemingly exclude certain preferred embodiments that have a flat inner surface when viewed axially. See col. 6:11-14 ("Connector **60** differs from connector **10** primarily in that it employs a sealing element with a flat outer surface. The profile of the clamping ring is correspondingly modified."); Adams Respiratory Therapeutics, Inc. v. Perrigo Co., 616 F.3d 1283, 1290 (Fed. Cir. 2010) ("A claim construction that excludes the preferred embodiment 'is rarely, if ever, correct and would require highly persuasive evidentiary support.'"); Phillips, 415 F.3d at 1323 (improper to import limitations from specification into claim).

Based on the intrinsic evidence, the Court finds that one of ordinary skill in the art would have understood the term to mean "a cross-section showing the inner surface of the clamping ring to be a line deviating from straightness in a smooth and continuous manner."

B. "Primary Inner Surface" by a "Readily Severable Connection"

Although the parties identified "primary inner surface" as a disputed term (dkt. #17 at 10), neither party addressed this term in their memoranda. Plaintiff did not contest Romac's construction of the term in the Joint Claim Construction Statement. Dkt. #117.

Accordingly, the Court adopts Romac's construction of the term "primary inner surface" as "the inside surface of the outer most seal ring." Dkt. #17 at 10.

Romac contends that "readily severable connection" means "a material connection between the 'primary inner surface' on the outermost ring and the next layer below. The 'severable connection' is split or broken by a cutting or tearing action." Dkt. #121 (Def.'s Opening Br.) at 19. Romac also contends that "readily severable connection" "does not include a nested or interlocking interface between the primary inner surface and the next layer below if there is not also a material connection. 'Several' is not synonymous with separable." Id. Plaintiff contends that the term is properly construed to mean "a connection which can easily be separated." Dkt. #123 (Pl.'s Opening Br.) at 16.

The claim provides that the "sealing element is formed with a primary inner surface and at least one substantially cylindrical coaxial layer, said layer being connected to said primary inner surface by a readily severable connection . . . ." Dkt. #124, Ex. 2 ('955 Patent) at col. 6:47-51. In summarizing the invention, the specifications explain that the universal pipe connector is comprised of, among other things:

> an annular sealing element deployed around an inner surface of the clamping ring for sealing around the pipe end, the sealing element being formed with a primary inner surface and at least one substantially cylindrical coaxial layer of thickness ½ d, **the layer being connected to the primary inner surface by a readily severable connection, such that, by selectively removing the layer** and tightening the tightening mechanism, the pipe connector forms a sealing connection with pipes having diameters varying over a continuous range of at least 2 d.

Id. at col. 2:17-27 (emphasis added).

Romac's proposed construction, which comprises two paragraphs, is unnecessarily complicated and redundant. Plaintiff's construction, that "severable" and "separable" are interchangeable, is not supported by the prosecution history. In the parent application for the '955 patent, the examiner rejected the application based on prior art patents claiming

"readily severable" connections. Def.'s Ex. 504 at 53, 54; dkt. #131-1 (2d Keyes Decl.) at 119, 120, Ex. 9 at pp. 3, 4. In response, plaintiff changed "severable" to "separable" and responded: "The concept of one seal with at least two layers one of which is removable is not shown or taught in any of the prior art cited in the Office Action or known to Applicant. The layering concept permits layers to be removed so that the invention can easily accommodate different diameter pipes." Def.'s Ex. 504 at 58, 61; dkt. #131-1 (2d Keyes Decl.) at 125, 128, Ex. 10 at pp. 2, 5. The examiner rejected plaintiff's amendment as being anticipated by prior art, and plaintiff thereafter abandoned the parent application. Def.'s Ex. 504 at 71. When plaintiff re-filed the application, plaintiff used the term "severable." This prosecution history demonstrates that plaintiff intended "severable" and "separable" to have distinct meanings.

Based on the intrinsic evidence, one of ordinary skill in the art would have understood the term "readily severable connection" to mean "a joinder or linkage that is capable of being removed easily."

C. "Adapted to Swivel"

Plaintiff contends that "adapted to swivel" is properly construed as "the sealing element can partially rotate within the retainer ring." Romac contends the proper construction is:

> "Swivel" means "swivel." The sealing element is designed to turn within the clamp ring (as illustrated in the patent, e.g., Fig. 1) in order to adjust to variations in pipe alignment. The curved outer surface seal part (30) moves relative to the complementary [sic] shaped inner surface of the clamp ring (*see, e.g.*, Col. 4:24-28). "Swivel within said inner surface" does not include the natural elastic compression or stretching in the seal material itself that has always provided a range for connecting misaligned pipes when using pipe couplings.

Dkt. #121 (Def.'s Opening Br.) at 21.

The claim provides that the "sealing element is adapted to swivel within said inner surface to accommodate variations in pipe alignment." In the prosecution history, the

examiner commented that "the recitation that an element is 'adapted to' perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense." Dkt. #124, Exs. 9 & 10 at p.4.

Romac's proposed construction is unnecessarily complicated, and improperly attempts to import limitations from the specifications into the claims. See Phillips, 415 F.3d at 1323. Plaintiff's construction using the term "rotate" is not supported by the intrinsic evidence.

Based on the intrinsic evidence, the Court construes the term as an "ability to swivel or pivot."

D. "Between a First Maximum Diameter and a Second Minimum Diameter"

Plaintiff contends that the term should be construed to mean "over a range from the maximum diameter of pipes that can be effectively sealed to the minimum diameter of pipes that can be effectively sealed." Romac construes "maximum diameter" to mean "the largest measured diameter of the clamp ring without any tightening force applied to it." Romac construes "minimum diameter" to mean "the smallest diameter the clamp ring can be tightened to 'empty' (i.e., without a pipe in the coupling)."

The claim provides that the "claiming ring comprises a tightening mechanism for tightening said clamping ring between a first maximum diameter and a second minimum diameter." Dkt. #124, Ex. 2 ('955 Patent) at col. 6:62-65. The claim further provides that "said first and second diameters differ by at least a length d and wherein said cylindrical coaxial layer is of thickness ½ d such that, by selectively removing said layer and tightening said tightening mechanism the pipe connector forms a sealing connection with pipes having diameters varying over a continuous range of at least 2 d." Id. at col. 6:66-7:5. The specification describing figure 1 provides:

> Generally speaking, pipe connector **10** includes a connector body **16** having an opening **18**, **20** for receiving each pipe end. A clamping

> ring **22** extends around, and mechanical engages with, each opening. Each clamping ring features a tightening mechanism **24** for tightening the clamping ring between maximum and minimum diameters which differ by at least a length d.

Id. at col. 3:46-53.

Based on the intrinsic evidence, one of ordinary skill in the art would have understood the term "between a first maximum diameter and a second minimum diameter" to mean "a range from the largest measured diameter of the clamping ring to the smallest measured diameter of the clamping ring."

E. "Split Ring"

Plaintiff contends split ring means "an incomplete ring." Dkt. #123 (Pl.'s Opening Br.) at 21. Romac contends that "split ring" means "a one piece ring, split at the top." Dkt. #121 (Def.'s Opening Br.) at 23.

The claim provides: "wherein said clamping ring is formed as a split ring with outward-turned bolt flanges of substantially arcuate form, said tightening mechanism including a bolt connected between said bolt flanges." Dkt. #124, Ex. 2 ('955 Patent) at col. 7:6-8:2. The specification provides:

> Turning now to the features of clamping ring **22**, this is preferably formed as a split ring with outward-turned bolt flanges **46** and **48**. It is a particular feature of certain preferred embodiments of the present invention that flanges **46** and **48** have an outwardly curved, and typically substantially arcuate, form. This form ensures that the closest points of the flanges are always parallel, independent of the stage of tightening of ring **22**.

Id. at col. 5:33-39.

Based on the intrinsic evidence, one of ordinary skill in the art would have understood the term to mean "an incomplete ring."[3] Accordingly, the Court adopts

[3]The Court declines Romac's invitation to review weak extrinsic evidence of a separate, unrelated patent and its prosecution history to construe this claim term. See Goldenberg v. Cytogen, Inc., 373 F.3d 1158, 1167-68 (Fed. Cir. 2004).

plaintiff's construction.

It is so ORDERED.

DATED this 11th day of July, 2011.

Robert S. Lasnik
United States District Judge